# Productivity or Gender?
# The Impact of Domestic Tasks across the Wage Distribution

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Word count excluding tables: 9,305


*Acknowledgements:* Thanks to Markus Gangl and Susan Harkness for feedback on methodological issues, and participants at the 2015 Population Association of America annual meeting in San Diego, and at the University of British Columbia, Goethe University, and WZB Berlin sociology seminar series for helpful comments on earlier drafts. Any remaining errors are our own. Ideas in the paper were developed as part of the first author's project funded by the European Research Council (ERC) under the European Union's Horizon 2020 research and innovation program (grant agreement No 680958). Opinions expressed here reflect only the authors' views; the Agency is not responsible for any use that may be made of the information it contains.

**PRODUCTIVITY OR GENDER?**
**THE IMPACT OF DOMESTIC TASKS ACROSS WOMEN'S AND MEN'S WAGE DISTRIBUTIONS**


## Abstract

This paper assesses the wage impact of domestic tasks across women's and men's wage distributions given the cross-distribution variation in unpaid work time. The volume/productivity versus the gender-class normative argument developed here suggest competing hypotheses. Analyses of pooled 2010-15 waves of the American Time Use Survey using unconditional quantile regression revealed that an increase in the lesser time women at the top of the wage distribution spent doing routine housework predicted a smaller wage penalty than at the bottom of women's wage distribution. Conversely, men at the top of their wage distribution spent the least time doing routine tasks, but incurred the largest penalty for an increase in that time. Increases in non-routine housework or childcare time did not negatively affect the wage distributions of women or most men. Results supported the volume/productivity argument for routine housework among women, but a gender-class normative argument for men.



Key words: housework, income and earnings, unconditional quantile regression

## PRODUCTIVITY OR GENDER?
## THE IMPACT OF DOMESTIC TASKS ACROSS WOMEN'S AND MEN'S WAGE DISTRIBUTIONS

Researchers usually take one of two causal perspectives when exploring the relationship between wages and domestic time. Some test Becker's (1985) argument that time in unpaid tasks undermines employment productivity and predicts a wage penalty (Bryan & Sevilla-Sanz, 2011; Coverman, 1983; Hersch & Stratton, 1997; Noonan, 2001). Others assess Gupta's (2006, 2007) autonomy perspective asserting that higher wages allow individuals to opt or buy out of routine housework (Craig, Perales, Vidal, & Baxter, 2016; Gupta, et al., 2010; Hook, 2017). Carlson and Lynch (2017) showed that both perspectives are simultaneously valid for routine housework among U.S. married individuals, although there are gender differences in effects. Wives' wages and housework time are reciprocally related, whereas the causal direction for husbands is from housework to wages only (Carlson & Lynch, 2017). This paper also brings together the two causal perspectives, but to theorize and assess how, given the wage-related variation in housework and childcare time, the magnitude of the associated wage penalty varies across U.S. women's and men's wage distributions.

One reason why the impact of domestic tasks might vary across the wage distribution is that productivity is affected only after the volume of housework exceeds some threshold (Hersch & Stratton, 1997). For example, women have been argued to incur larger wage penalties for core housework time because they spend appreciably more time doing these tasks than men (Hersch, 2009; Hersch & Stratton, 1997, 2002; Noonan, 2001). Findings from the autonomy literature suggest a novel way to test the volume argument among women and among men that we undertake here. As higher wages predict women spend less time in core housework (Gupta, 2006; Hook, 2017; Killewald & Gough, 2010), a volume argument is supported if the wage penalty for housework decreases across women's wage distribution. Conversely, the minimal

wage variation in men's housework time should lead to little variation in the housework penalty across men's wage distribution.

An alternative theoretical argument developed here is that gender differences in the cross-distribution wage effects of domestic tasks reflect and reinforce material hierarchies of the gender-class stratification system (Acker, 1990; Ridgeway & Correll, 2004; Risman, 2004). Gendered divisions of labor reinforce widely-held cultural beliefs about paid work as inherent to masculinity and unpaid work as inherently feminine (Ferree, 2010; Sullivan, 2013; West & Zimmerman, 1987). Relatedly, organizations continue to value career-committed, inherently masculine ideal workers unencumbered by family demands (Acker, 1990; Bianchi, Robinson, & Milkie, 2006; Williams, et al., 2013). Employer expectations of work devotion are particularly high for executives, with executive men still assumed to have a stay-at-home wife to handle family demands (Blair-Loy, 2003; Williams, 2000). So in contrast to the volume/productivity argument, the work devotion expectation among high-wage workers suggests that wage penalties for time in unpaid domestic work should be larger at the top of the wage distribution irrespective of how little time high-wage women or men might spend doing these tasks. The gender-class normative pressures on elite men in particular suggest wage penalties for domestic time will be greatest at the top of men's wage distribution.

Estimating "average" wage effects of domestic tasks as done in all tests of the productivity argument to date provides no insight into how effects vary across women's and men's wage distributions. Instead, we select a two-step unconditional quantile regression (UQR) procedure developed by Firpo and his colleagues (2009). As discussed more in the methods section, the advantage of UQR for our analysis is that it provides OLS estimates of the effect of an identically-sized increase in individuals' existing domestic time at different quantiles

(percentiles) of the unconditional wage distribution, controlling for other covariates used to predict wages. Hence we pool 2010-2015 cross-sectional waves of the American Time Use Survey (ATUS) and use UQR to estimate the wage impact of unpaid domestic time across women's and men's wage distributions. Time diary data are ideal for this task as they contain measures to distinguish core from non-routine housework as well as childcare. The data also allow us to focus analyses on the effects of unpaid activities on employment days when they have the greatest likelihood of affecting productivity (Hersch, 2009; Hook, 2017). These excellent data and our innovative analytical approach reveal between- as well as within-gender variation in the wage effects of domestic tasks that reinforce gender-class systems of stratification only partially related to productivity.

## THE UNPAID TASKS – WAGE RELATIONSHIPS

### *Impact of Wages on Domestic Time*

Researchers became interested in the impact of earnings on domestic tasks with the accruing evidence that women's greater relative resources do not predict egalitarian divisions of couples' housework as indicated by bargaining models (Bittman, et al., 2003; Brines, 1994; Greenstein, 2000). Gupta (2006) instead proposed an "autonomy" model, arguing a woman's absolute income is a more important determinant of her domestic time, in part because money provides the possibility of purchasing market substitutes (see also Cohen, 1998; Craig, et al., 2016). Analyzing the National Survey of Families and Households (NSFH), Gupta (2006) illustrated that both married and single women's time in routine housework decreased as their earnings increased. Limiting analyses to partnered women, he further found that the predicted impact of wives' absolute earnings was significantly larger than the impact of their relative share of household earnings (Gupta, 2007). Gupta (2006) concluded these effects highlight a class

dimension of housework time among women, with high-wage women able to purchase greater domestic time equality with men.

Nevertheless, his analyses also revealed that even high-wage women could not eliminate daily housework entirely (Gupta, 2006, 988). Later analyses with different data sets confirmed a non-linear wage-related reduction in wives' housework time. Analyzing the Panel Study of Income Dynamics (PSID), Killewald and Gough (2010, 995) reported that wives' weekly housework time decreased by almost three hours between the $10^{th}$ and $90^{th}$ percentiles of the earnings distribution, but most of the decrease occurred across the first and second quartiles. In contrast, men's seven hours per week of housework did not vary significantly with the passage of time or changes in their earnings (Killewald & Gough, 2010, 1001).

Hook (2017) argued the earnings-related reduction in housework should be greatest on weekdays when unpaid work has the greatest potential conflict with paid work. This was the case for wives, whose housework performed on weekdays decreased most sharply across the first earnings quartile (Hook, 2017). There was a far weaker relationship between wives' earnings and weekend housework, and no significant variation across wives' earnings distribution (Hook, 2017). Among men, neither relative nor absolute earnings predicted any change in their housework time on weekdays or weekends (Hook, 2017).

The autonomy literature, like the relative resource literature inspiring it, theoretically differentiates childcare from housework (Sullivan, 2013). The rationale is that earnings are used to get out of unpleasant tasks like cleaning the toilet, whereas individuals rate childcare as almost enjoyable as leisure time (Coltrane, 2000; Sullivan, 2013). Mirroring this, women's housework time has decreased steadily since the 1970s, whereas mothers' and fathers' time with children

continues to increase (Bianchi, et al., 2006). In addition, men's and women's higher wages predict more rather than less time in childcare (Raley, Bianchi, & Wang, 2012).

More generally, researchers testing the autonomy model never questioned the causal assumption that wages affect housework time. Carlson and Lynch (2017) are an exception. Using two-stage least squares and structural equation modeling to account for reciprocal causation, they showed that not only are wages negatively associated with housework time, but housework time is negatively associated with wages. Whereas the autonomy model applied only to women, greater time in routine housework negatively affected the wages of both men and women (Carlson & Lynch, 2017).

### *Impact of Domestic Time on Wages*

Two decades before Gupta's autonomy model, Becker (1985) theorized the opposite causal relationship between unpaid tasks and wages to explain the persistent gender wage gap despite women's gains in education and work experience. Becker (1985) began from the premise that individual "effort" is a finite resource. Greater time in housework, childcare, and to a lesser extent leisure, depletes the available effort for employment, lowering productivity as reflected in lower wages (Becker, 1985). Consequently, women would face wage penalties if they spend more time doing domestic tasks even when employed the same number of hours as men (Becker, 1985). However, the unpaid-paid work productivity tradeoff applied to both genders, such that men should incur similar wage penalties for greater time in any domestic task (Becker, 1985).

Early estimates on cross-sectional (Coverman, 1983) and the PSID (Hersch & Stratton, 1997) survey data found that each additional hour of housework predicted a 0.5% net wage penalty for women, but the studies disagreed on whether men's penalty was significantly smaller than women's. Hersch and Stratton (1997) suggested one reason for the gendered effects is that

productivity is hampered only after housework exceeds some minimum threshold. To test this, they converted the rather crude PSID housework time measure into categories of less than 10 hours, 10 to 20, and 20 or more hours per week. Hersch and Stratton (1997) found significant threshold effects among women, in that their wage penalty did not become statistically significant until their housework time exceeded 10 hours per week, with the penalty stable above that. The 10-hour threshold, however, was exceeded by 86% of wives but only 31% of husbands (Hersch & Stratton, 1997, 293).

Later analyses using the NSFH revealed that the type of unpaid task matters. Noonan (2001) found that each additional hour in daily, routine housework predicted a significant net wage penalty of 0.5% for women and 0.4% for men. Hersch and Stratton's (2002) more restricted sample of non-Hispanic whites found that only women incurred a significant 0.4% routine housework wage penalty. Both studies reported that time spent in non-routine housework that can be scheduled to when it is more convenient did not predict a wage penalty for either gender (Hersch & Stratton, 2002; Noonan, 2001). The researchers similarly concluded it is the inflexible demands of daily unpaid tasks that interfere with employment productivity (Hersch & Stratton, 2002; Noonan, 2001).

The NSFH data preclude directly testing this conclusion as they do not differentiate time on employment from non-employment days. The survey also lacks any measures of childcare time that Becker (1985) argued negatively affects wages as well. To overcome these limitations, Hersch (2009) used the cross-sectional 2003-2006 ATUS data and differentiated time on market from non-market days. Again, productivity arguments failed to hold for all domestic tasks and effects were gendered. Only women's market-day routine housework predicted a significantly larger penalty than that done on non-market days, -2.5 as compared with -0.007%, respectively

(Hersch, 2009). Women's time in non-routine housework predicted no penalties as found in the NSFH studies, but men's time in some of these tasks even on market days predicted a slight wage premium (Hersch, 2009). Contrary to Becker's assertions, greater time in childcare predicted a slight wage premium rather than penalty that was larger for women than men, especially women's childcare done on non-market days (Hersch, 2009).

One explanation for the mixed support for the unpaid-paid work productivity tradeoff argument could be that all of the studies above reported mean effects. In contrast, the autonomy evidence highlights that time in different domestic tasks varies across women's and men's wage distributions. This variation leads to two hypotheses testing the volume/productivity explanation. The first hypothesis is that, because housework time decreases as wages increase, the wage penalty for housework should decrease as men's, and especially women's wages increase (H1). Additional support for the volume explanation is indicated if the wage penalty for childcare, in contrast, increases as mothers' and fathers' wages increase because of the associated increase in childcare time (H2).

We anticipate wage effects will be most pronounced for the routine housework that comprises the bulk of family unpaid work that is difficult to eliminate entirely. Despite the lack of evidence of non-routine housework or childcare wage penalties at the mean, they are included in hypotheses because wage effects may vary at different points in the wage distribution. All domestic tasks are limited to those performed on employment days as these are most likely to interfere with employment productivity (Hersch, 2009; Hook, 2017). The assumption is that domestic time undermines productivity directly as argued by Becker (1985); it is unlikely an employer is knowledgeable about employees' domestic activities.

At the same time, the gendered pattern of domestic task wage effects encourages development of an alternative explanation to the productivity argument. A gender-class normative explanation is outlined next, along with its related hypotheses that diverge somewhat from the volume/productivity hypotheses.

## A GENDER-CLASS PERSPECTIVE

A gender perspective developed in the household literature as economic-based explanations failed to account for persistent gendered divisions of unpaid work (Brines, 1994; Coltrane, 2000). One insight from a gender perspective is that unpaid work is not just about having a clean home and well-fed children. Domestic work is in part gender performance of normative, intimate masculine and feminine identities—how we "do" gender (West & Zimmerman, 1987). Importantly, norms of masculinity and femininity and the related gendered division of paid and unpaid work reflect the constantly-contested power relations between women and men (Ferree, 2010). As such, normative expectations are brought to bear on evaluations of women and men in different institutional contexts, and linked to the distribution of material goods (Ridgeway & Correll, 2004; Risman, 2004).

Routine housework and childcare are both traditionally feminine, but differ in their implications for gender power relations. Most people rate core housework as the least desirable activity, being boring, repetitive, and done in isolation (Sullivan, 2013). Women's persistent responsibility for the bulk of core housework regardless of wages is indicative of gender power inequalities associated with heterosexual families (Sullivan, 2013). From a gender perspective, it is therefore not surprising that only core housework consistently predicts a wage penalty that is often larger for women, reinforcing a fundamental gender power and related material hierarchy. Non-routine tasks such as mowing the lawn and fixing the car, in contrast, are typically defined

as masculine (Coltrane, 2000; Sullivan, 2013). As such, performance of this type of housework predicts no net wage penalties in the gender hierarchy, and perhaps premiums for the men doing these masculine-identified tasks as found by Hersch (2009).

Like routine housework, childcare time is traditionally defined as feminine but is not considered menial or mundane. In addition, cultural norms of involved fathering diffused with second wave feminism and mothers' increasing labor force participation (Messner, 1993). Recent surveys find that time spent with children is now highly valued by men as well as women (Coltrane, 2000; Sullivan, 2013). With the growth in dual-earning families across the latter part of the 20th Century, employers acknowledged the cultural shift and responded by providing more "family-friendly" work options such as reduced hours or telecommuting (Glass, 2004; Williams, Blair-Loy, & Berdahl, 2013). The U.S. government mandated further support—well behind most countries in Europe—with the 1993 Family and Medical Leave Act requiring that employers provide covered employees with up to 12 weeks of job-protected unpaid leave to deal with certain medical or family reasons. This broader cultural endorsement of family time may account for the negligible childcare wage penalties found by Hersch (2009).

Power relations between women and men, however, intersect with class and other social categories (Ferree, 2010; Ridgeway & Correll, 2004). Research on the workplace flexibility stigma suggests the cross-distribution wage effects of unpaid work may run counter to those proposed under the volume/productivity argument.

### *Variation in Gendered Wage Effects among Women and Men*

Employer expansion of family-friendly policies did not necessarily signal a fundamental shift in organizations' ideal worker as someone with no obligations beyond the job (Bianchi, et al., 2006; Williams, et al., 2013). Informal practices can stigmatize the use of such policies and

organizations continue to reward workers displaying greater work devotion (Blair-Loy, 2003; Williams, 2000; Williams, et al., 2013). As a result, employees using flexible work options may encounter economic and/or social sanctions, although the extent and nature of these varies along class lines (Williams, et al., 2013).

An expectation of work devotion is particularly strong among elite women and men (Blair-Loy, 2003). For example, Brescoll and colleagues (2013) found that employers were more likely to grant low- than high-status men's requests for flexible work schedules for family reasons. Similarly, Glass (2004) found that mothers in professional or managerial occupations incurred slightly larger wage penalties when they worked reduced hours or worked from home, as compared with mothers in other occupations who took up similar workplace options.

The variation in expected work devotion leads to our third hypothesis that contrasts with the first: wage penalties for time in housework on employment days will be larger at the top than bottom of women's and men's wage distributions (H3). The work devotion perspective suggests that wage penalties for greater time in childcare on employment days will also be greater at the top of the wage distributions, but this is not empirically distinguishable from the second hypothesis. As before, the assumption is that employers disproportionately penalize high-wage workers' distraction from the job, although not necessarily with direct knowledge of employees' time in unpaid work.

There are also gendered effects of the flexibility stigma relating to normative expectations of masculine and feminine behavior. Indicative of the cultural persistence of the inherently male ideal worker, men face greater stigma or "backlash" (Rudman & Mescher, 2013; Vandello, et al., 2013) for domestic commitments than do women. For example, Butler and Skattebo (2004) found that male employees who experienced a family conflict received lower

performance ratings and lower reward recommendations, whereas ratings of women were unaffected by family conflicts. Rudman and Mescher (2013) found that men who requested the 12-week unpaid family leave were not only rated as bad workers, but incurred career penalties for being viewed as feminine. Similarly, Vandello and colleagues (2013) found that although both women and men using flexibility policies were recommended for lower raises, men faced harsher character judgments as being gender deviant (see also Berdahl & Moon, 2013). Thus at the intersection of class with gender, we anticipate that the penalty for time spent doing any domestic task will be largest at the top of men's wage distribution (H4). Table 1 summarizes the four hypotheses derived from the volume/productivity and gender-class normative arguments.

[Table 1 about here]

Of interest are the wage effects of domestic tasks after controlling for the usual individual determinants of wages. These include weekly hours of employment, occupation, education, and experience (Cooke, 2014; Hersch, 2009; Noonan, 2001). As wage returns to experience vary with education, net wage estimates should also control for the interaction between years of education and experience measures (Heckman, Lochner, & Todd, 2006). Marital status, number of children, race-ethnicity, and disability affect wage levels net of human capital, occupation, and work hours (Altonji & Blank, 1999; Cooke, 2014). Finally, as the productivity argument relates to tradeoffs in time spent in all activities undertaken in a 24-hour period (Becker, 1985; Hersch, 2009), it is important to control for leisure time.

## METHOD

### *Data and Sample*

We select the American Time Use Survey (ATUS) sponsored by the Bureau of Labor Statistics (BLS), maximizing sample size by pooling the 2010 through 2015 cross-sections from the ATUS Extract Builder (ATUS-X; Hofferth, Flood, & Sobek, 2015). Time diary provide the most

detailed information on time use and are considered superior to survey measures, which are prone to bias. Infrequent activities may be under-reported in survey formats whereas time spent in more frequent activities is often over-estimated (Coltrane, 2000). In addition, directly asking respondents about time in domestic tasks introduces the risk of social bias, which varies across the wage distribution. More advantaged men and women claim more egalitarian attitudes than their less-advantaged counterparts (Coltrane, 2000). This could lead such men to over-estimate and women to under-estimate how much time they spend in domestic tasks. Time diary data help to circumvent social biases because respondents are not primed for topics (Pleck & Stueve, 2001).

One adult from each household is randomly selected to be the ATUS respondent, with respondents interviewed about their time use in the 24 hours prior to 4 a.m. on the day of the interview. The sample is randomized by day: Mondays through Fridays each account for 10%, and Saturdays and Sundays for 25% each (BLS, 2013). From all adults, we select a sample of the employed (at work) men and women aged 18 to 54 (n = 31,655). The BLS does not collect earnings for the self-employed; thus we omit 9.0% (*n*= 2,859) from the sample. Also excluded are 1,196 full-time students, 516 respondents who were not paid hourly and have variable hours, and 28 respondents who reported weekly earnings of less than one dollar. There are no missing values on other measures used in our analyses. These criteria yield an initial analytic sample of 13,663 women and 13,393 men.

### *Employment Day*

We test cut-points of five minutes, and one, two, three, and four employment hours on the diary day. Results are robust beginning at the one-hour cut used by Hersch (2009). The magnitude of the routine housework estimates increase slightly as the cut-point increases, but direction and

statistical significance of all results are the same. Yet using Hersch's one-hour cut point to define a market work day seems unlikely to differentiate a usual work day from a non-work day for most employed Americans. Consequently we select a four-hour cut-point to designate a day an employment day. This provides a final sample of 6,701 women and 7,252 men on employment days. For the estimates of childcare on employment days only, we further limit the sample to parents (4,137 mothers and 4,150 fathers). As anticipated, tasks on non-employment days do not incur net wage penalties for the vast majority of women and men or mothers and fathers (analyses available from authors).

### *Key Variables*

The dependent variable is the log of hourly wages, with wages in all waves adjusted to 2015 dollars using the Consumer Price Index. About two-fifths of workers report an hourly wage to the BLS. For the remaining workers, an hourly wage is calculated by dividing usual weekly earnings (including usual overtime) by usual hours worked per week at all jobs. The BLS (2013) imputes missing weekly earnings using relational imputation, longitudinal assignment, or hot-deck allocation. The imputation rate for our specific sample is 10.6%, but including a binary flag for the imputed earnings is not associated with the dependent variable and does not appreciably affect estimates. Results are also robust to deleting this entire group from the sample. The BLS top-codes weekly earnings at $2,884.61, which affects 7.6% of non-hourly workers in the sample.

The key independent variables are hours per day in routine and non-routine housework, and childcare, per activity groupings defined by BLS in its published tables. Routine housework is the sum of time spent in interior cleaning, laundry, sewing, putting away household items, grocery shopping, and food and drink preparation, presentation, clean-up, and related travel.

Non-routine housework includes total time in lawn and garden care, interior and exterior maintenance, repair, and/or decoration of vehicles, appliances, tools, and toys, and related travel. Care includes physical care, organization and planning, looking after, waiting for or with, picking up and dropping off children, activities related to their education or health, reading, playing, arts and crafts, sports, talking with and listening to, helping or teaching (not related to education), and attending children's events; and related travel. The ATUS collects data for only respondents' primary activities. If respondents are multi-tasking it is at their discretion to determine their main activity. The ATUS does ask respondents with children under age 13 to report if children were in their care during each activity. When we include this measure of secondary childcare in models, no effects are statistically significant (results available from authors).

We control for the usual weekly hours of paid employment; alternative quadratic and log measures of weekly employment hours did not alter net wage effects of the domestic tasks. Education is measured in years, and we include a quadratic of potential work experience (age minus years of education minus the six years prior to the start of compulsory schooling, and its square), along with education-experience interaction terms (Heckman, et al., 2006). Occupation is measured with an indicator variable for service, sales, and administrative positions, and another for construction, production, and transport-related occupations. Managerial and professional occupations are the referent. Disability (including any physical difficulty related to vision, hearing, or mobility, any cognitive difficulties, or any physical or mental health conditions lasting at least six months that make personal care or basic activities outside the home difficult) is indicated with a dummy variable. We do not drop these respondents, as the

categories make it impossible to ascertain to what extent the disability limits employment, only that it might.

Three indicator variables capture partnership status: one for married, one for cohabiting, and one for previously married individuals, with the referent being single. Also included is the number of own children in the household. Sensitivity tests using dummy variables for one child, two children, and three or more children did not alter the wage effects of domestic tasks. Similarly, including an indicator for when pre-school children are in the household did not alter any net wage effects of housework or childcare. Race-ethnicity indicator variables include one each for Hispanic, Black, and Other (Asian, Native Americans, and Pacific Islanders), with non-Hispanic White the referent. We include controls for workers living in metropolitan areas (non-metro referent), whether the diary was completed on a weekend day, and dummies for each wave of the pooled data (except 2015) to control for business cycle effects. The leisure time control includes time spent socializing, relaxing, and leisure; sports, exercise, and recreation; and religious and spiritual activities.

### *Analytical Technique*

Examining the net wage impact of domestic time across women's and men's wage distributions requires a regression technique that allows the coefficients to take on different values at different points (quantiles) of the wage distribution. Quantile regression has been around since the late 1970s, but the estimator developed by Koenker and Bassett (1978) provides estimates at different quantiles of the conditional wage distribution. With conditional quantile regression (CQR), including the usual list of covariates in a wage equation may alter the pre-regression rank order of individuals (Cooke, 2014; Killewald & Bearak, 2014). This can alter the appropriate interpretation of effects. As Cooke (2014) notes, effects for someone at the $10^{th}$ quantile of the

wage distribution among university graduates may not be the same as effects at the 10th quantile of the wage distribution of all workers.

We instead use a two-step procedure developed by Firpo and his colleagues (2009) that allows researchers to add covariates without redefining the quantiles of the outcome variable (Killewald & Bearak, 2014). The first step is to estimate the "recentered influence function," creating a transformed dependent variable (Firpo, Fortin, & Lemieux, 2009). With a continuous measure like wages, the transformed dependent variable can then be analyzed using ordinary least squares (OLS) regression (Firpo, et al., 2009). The use of OLS in the second step allows effects to be interpreted as the impact at the specified quantiles when some constant increase in X is added to everybody's value of X, controlling for the other covariates (Firpo, et al., 2009; Rothe, 2012). Hence we can see what happens across the wage distribution when we similarly increase domestic time, on top of everyone's current domestic time.

Note these are estimated effects on the wage distribution. To interpret coefficients as individual causal effects (i.e., what happens to a person's individual wage when his or her domestic time increases) requires an assumption of rank invariance or at least similarity (Dong & Shen, 2017). In other words, the increase in domestic time should not cause a person to change wage quantiles. We are fairly confident this assumption holds when looking at the small increases in domestic tasks considered here, although the data lack the instrumental variables to conduct a formal test of this as suggested by Dong and Shen (2017).

Consequently we use the *rifreg* command in STATA to estimate the net effects of unpaid work at the 10th, 25th, 50th, 75th, and 90th quantiles of women's and men's unconditional hourly wage distributions. To incorporate the uncertainty in the two-stage UQR estimation, we bootstrap standard errors resampling 200 times. All analyses are weighted with the official

ATUS weights that account for differential non-response rates across days of the week and demographic groups as defined by race, sex, age, presence of children, and education (BLS, 2013).

### *Further Empirical Considerations*

The studies testing the productivity argument all noted possible measurement problems if wages also affect housework time as assumed in the autonomy literature (Carlson & Lynch, 2017; Coverman, 1983; Hersch, 2009; Hersch & Stratton, 1997, 2002; Noonan, 2001). If such endogeneity is a problem, OLS estimates of the impact of domestic tasks on wages will be downwardly biased and indicate a larger wage penalty than actually exists. Formal analytical tests for endogeneity confirm that the direction of causality among men is that housework time affects their wages, not vice versa (Carlson & Lynch, 2017; Hersch & Stratton, 1997). Among women, however, the relationship is reciprocal: women's wages affect their housework time and their housework time affects their wages (Carlson & Lynch, 2017; Hersch, 2009; Hersch & Stratton, 1997, 2002; Noonan, 2001; see Maani & Cruickshank, 2010 for a review). The studies comparing adjusted estimates with those from OLS models, though, conclude that the OLS estimates of the impact of women's wages on their routine housework time are not seriously biased (Hersch, 2009; Hersch & Stratton, 1997, 2002; Maani & Cruickshank, 2010; Noonan, 2001). In addition, our estimates of effects at different quantiles of women's unconditional wage distribution may reduce the measurement error associated with estimating mean effects among women at all wage levels.

What we cannot do with our cross-sectional ATUS data is control for stable unobserved differences among individuals that may account for some of the domestic time-wage relationships. If unmeasured heterogeneity is significant, OLS estimates will again be

downwardly biased, indicating a larger wage penalty than actually exists net of unobserved characteristics. Indeed, controlling for fixed effects reduces women's and eliminates men's OLS estimated housework wage penalties (Hersch & Stratton, 1997). But UQR provides estimates of effects of a constant increase in individuals' current domestic time at specified wage quantiles. Consequently, we are comparing effects among similarly-waged individuals who likely share unmeasured characteristics affecting their wage levels. Nonetheless, whether UQR does indeed reduce omitted variable bias when predicting wages will need to be tested in future research with suitable panel data or instrumental variables.

At the same time, we do not consider the inability to use fixed effects models problematic when estimating wage effects of domestic tasks among men. Fixed effects models are sensitive to measurement error, which is exacerbated when there is little variation in a variable over time. In this case, effects get subsumed in the person fixed effect and bias coefficients toward zero (Allison, 2009). As Killewald and Gough's (2010) panel analysis revealed, men's housework time hovered around seven hours per week year after year and regardless of earnings. This may account for the lack of significant association between men's housework and wages when using fixed effects as compared with OLS models (i.e., Hersch & Stratton, 1997). In all, the UQR estimates may somewhat overstate wage penalties among women, but may be preferable to fixed effects estimates of the net impact of domestic time across men's wage distribution.

## RESULTS

Weighted descriptive statistics for the key variables are presented in Table 2 (full descriptives are in Online Appendix Table A). Note that descriptive statistics pertain to individuals in the indicated range of each wage distribution, not at the specific quantile because very few individuals would have wages at each exact quantile. These descriptive statistics revealed both

within- and between-gender economic and time inequalities. The hourly wages of men in the top decile were 7.4 times as great as men's in the bottom decile, with the top/bottom wage ratio among women just slightly less at 7.2. On average, employed women and men in the sample worked full-time given our definition of an employment day, with average weekly hours increasing slightly as wages increased. Yet within each quantile of the respective wage distributions, men were in paid work three to six more hours per week than women.

[Table 2 about here]

In the domestic sphere, men at all wage quantiles spent less than half an hour per employment day doing core housework, with t-tests indicating the differences across men's wage distribution were not statistically significant. Women spent more than twice as much time as men doing core housework on employment days, but there was significant variation in this time among them. Consistent with the autonomy literature (Hook, 2017; Killewald & Gough, 2010), women's routine housework time decreased as their wages increased, with the reduction leveling off above the median. Both men and women spent appreciably less time doing non-routine housework on employment days (about 10 minutes per day among men, and less than five minutes per day among women). The only statistically (if not substantively) significant within-gender difference in non-routine housework was the lesser time (7.8 minutes) averaged by the highest-waged men.

There was slightly greater gender equity in parents' childcare time on employment days than routine housework at each quantile of mothers' and fathers' wage distributions. Low-wage parents spent significantly less time in childcare than parents across the rest of the wage distribution. The ratio of mothers' to fathers' care time was also largest in the bottom decile, at 2.43. Both parents in the upper half of the wage distributions spent the most time, yielding

greater potential gender equity in childcare when higher-wage women partnered with higher-wage men (mother/father time ratios of 1.45 to 1.66). The time use patterns for both routine housework and childcare supported other evidence that the most advantaged women enjoy the greatest domestic time equity (Coltrane, 2000).

### *Wage Impact of Domestic Time across Women's Wage Distribution*

Key estimates of the wage impact of women's and men's unpaid tasks from unconditional quantile regressions are displayed in the top and bottom panels, respectively, of Table 3. Full results can be found in Online Appendix Table B. The discussion refers to the exponentiated coefficients from the table (($e^{(b)}$ - 1) x 100), to interpret them as the predicted percentage change in hourly wages for an increase in unpaid work at the indicated quantile of women's and men's wage distributions.

The first hypothesis from the volume/productivity argument was that net wage penalties for housework would decrease as women's and men's wages increased because their time in these tasks decreases. This was indeed the case among women. An increase in time the lowest-wage women spent doing routine housework predicted a statistically significant 5.4% (($e^{(0.053)}$ - 1) x 100) net hourly wage penalty. The penalty for a similar time increase lessened as women's wages increased, falling to 2.6% among women at the 90$^{th}$ quantile. The difference in the coefficients between the 90$^{th}$ and 10$^{th}$ quantiles of women's wage distribution was statistically significant ($t$=-1.91, one-tailed test). So the predicted wage penalty for women's routine housework supported the first volume/productivity hypothesis. As indicated in Table 2, women's core housework time reduced as their wages increase, with UQR estimates confirming a reduction in the associated wage penalty as wage increased as well. In all, effects of women's

routine housework supported the volume/productivity-related hypothesis (H1) rather than the competing work devotion hypothesis (H3).

Women spent a miniscule amount of time on employment days doing non-routine housework, with little variation in this time across women's wage distribution (per Table 2). Consistent with existing evidence (Hersch, 2009; Hersch & Stratton, 2002; Noonan, 2001), an increase in this type of housework did not predict a statistically significant penalty for women at any wage quantile. Yet again the penalty decreased as women's wages increase even if the individual coefficients were not statistically significant. In fact, non-routine tasks predicted a tiny premium for high-wage women. In any event, t-tests confirmed that the difference in estimates across women's wage distribution was not statistically significant. Therefore, only routine housework effects supported the first hypothesis that housework penalties would decrease as women's wages increased.

Similar to Hersch (2009), we found that mothers' greater time in childcare on employment days incurred no significant wage penalties. As hypothesized (H2), mothers at the $90^{th}$ quantile were predicted to incur the largest penalty (-0.9%) for each additional hour of employment-day childcare, but this effect was not statistically significant. Neither was the difference in the coefficients between the $10^{th}$ and $90^{th}$ quantiles ($t$=0.80). Consequently, we found no support for the hypothesis relating to childcare time among women from either a productivity (H2) or work devotion (H3) perspective.

[Table 3 about here]

*Wage Impact of Domestic Time across Men's Wage Distribution*

The variation in the impact of men's housework time on wages more strongly supported the work devotion (H3) rather than productivity hypothesis (H1). In fact, only at the $90^{th}$ quantile did

men incur a statistically significant 6.2% net wage penalty for an increase in routine housework done on employment days. This was almost six times larger than the predicted net penalty for men at the 10$^{th}$ quantile of the distribution, and more than three times as large as the predicted penalty for men at the median (50$^{th}$ quantile). T-tests noted in the table confirm that the 90/10 and the 90/50 differences in estimates were statistically significant ($p < 0.05$, one-tailed test). In addition, the core housework penalty at the top of men's wage distribution was more than twice as large as high-wage women's penalty. However, t-tests indicate that the difference did not quite reach standard levels of statistical significance. Thus an increase in core housework time on employment days predicted a significantly larger penalty for the highest- as compared with lower-wage men as hypothesized from a work devotion perspective (H3). The fourth hypothesis was not supported, however, as high-wage men's penalty was not significantly greater than high-wage women's penalty.

The pattern of men's non-routine housework wage effects across the distribution also differed from women's and modestly supported the work devotion (H3) rather than productivity hypothesis (H1). Only men at the 90$^{th}$ quantile were predicted to incur penalties for an increase in non-routine housework, although the effect was not statistically significant. In fact, an increase in men's non-routine housework time predicted a 4.1% wage increase at the median. T-tests confirm that the difference in the magnitude of effects between men at the 50$^{th}$ and at the 90$^{th}$ quantile was statistically significant. Relating to the fourth hypothesis, however, the difference between high-wage men's non-routine housework penalty and high-wage women's tiny premium was not statistically significant.

Variation in the net wage impact of childcare time was also greater across men's than women's wage distribution. Whereas fathers at the 10$^{th}$ and 25$^{th}$ quantiles were predicted to

receive slight albeit statistically insignificant net wage premiums for an increase in employment-day childcare, fathers at the 90th were predicted to incur a marginally significant 2.6% wage penalty ($p$=.054). Furthermore, the difference in the coefficients between the lowest- and highest-wage men was statistically significant ($t$=2.20). In all, effects among men indicated that the penalties for childcare done on employment days were greatest at the top of men's wage distribution, although we cannot distinguish whether this was because of productivity (H2) or work devotion (H3) effects. The magnitude of men's penalty at the 90th quantile was larger than women's at the 90th quantile, but the difference was not statistically significant. No result supported the fourth hypothesis that high-wage men would incur larger backlash penalties for time in any domestic task as compared with similar women.

## DISCUSSION AND CONCLUSIONS

The gendered division of unpaid work is a cornerstone of gender economic inequalities (Coltrane, 2000; Ferree, 2010; Risman, 2004). The economic model assumes that gender wage equality could be achieved if women shed themselves of all unpaid labor, or if men did an equal share (Becker, 1985). In pursuit of this equality, women's core housework time has decreased steadily since the 1970s (Bianchi, et al., 2006), but they use their own wages rather than rely on their partners to minimize time in these tasks (Gupta, 2007; Hook, 2017). Cracks in the economic logic grew larger with each analysis of the relationship between unpaid work and wages. Only core housework predicted a net wage penalty that was usually larger for women than men (Hersch & Stratton, 1997, 2002; Hersch, 2009; Noonan, 2001). Prior researchers offered productivity-related caveats such as threshold effects or timing to account for the gender differences (Hersch, 2009; Hersch & Stratton, 1997), but these, too, were gendered.

Our novel analytical approach revealed that gender differences in the wage effects of domestic tasks vary among women and among men as well. Consistent with the productivity argument, we found that women at all points of the wage distribution incurred significant net wage penalties for greater time spent doing core housework on employment days. Consistent with the associated volume argument, women at the top of the wage distribution spent significantly less time doing core housework than low-wage women and incurred a smaller penalty for an increase in that time. Consequently, as concluded by Gupta (2006), high wages predict greater gender equality in women's domestic time, magnifying inequalities among women.

More striking was our finding for men that greater time doing routine housework predicted a significant wage penalty only at the $90^{th}$ quantile of the wage distribution. This penalty was in fact slightly larger than that incurred by women at the bottom of their wage distribution. Across most of men's wage distribution, however, an increase in housework time on employment days would result in no wage penalties whatsoever. A question left for future research per the volume/productivity argument is whether wage penalties would emerge across the lower portion of men's wage distribution were there gender parity in core housework time. Nonetheless, results suggest that an increase in high-wage men's routine housework time would increase wage equality among men if not between men and women.

In all, we found that gender, at a crucial intersection with class, rather than simple productivity accounted for some of the wage effects of domestic tasks across women's and men's wage distributions. This complements the "doing" gender alternative to the relative resources explanation for gendered divisions of unpaid work (West & Zimmerman, 1987) and better accounts for existing evidence at odds with the productivity hypothesis as well. Spending

time in masculine-defined non-routine tasks like mowing the lawn or fixing the plumbing predicted a wage premium for men, but not for women (see also Hersch, 2009). Earlier research credited this effect to the fact these tasks can be scheduled for non-work days (Hersch & Stratton, 2002; Noonan, 2001), whereas we and Hersch (2009) found men's associated premium occurred when the tasks were done on employment days. Larger routine housework wage penalties at the top of men's wage distribution further attested to the persistent strength of the inherently male ideal worker model among elites, consistent with research on the workplace flexibility stigma (Rudman & Mescher, 2013; Vandello, et al., 2013).

The one finding running contrary to both productivity and gender-class normative arguments was that childcare done on employment days predicted no significant wage penalties at any point of the wage distribution for either parent. It may be tempting to conclude from these results that the ideal worker model and its inherent masculine bias are easing. Yet motherhood still predicts significant wage penalties accounted for by women's occupational selection, interrupted career trajectories, and shorter work hours undertaken to balance employment with care-giving (Gangl & Ziefle, 2009). Fatherhood still predicts a net wage premium that varies among men (Cooke, 2014; Hodges & Budig, 2010). What our results highlighted was that each parent's respective childcare time does not account for the parental wage disparities as argued by Becker (1985).

As with all research, there are limitations to our study. We reported important patterns of gender-class effects across the wage distribution, but our data and analytical approach provided no insight into the mechanisms behind these patterns. Although it is possible that employers are aware of mothers' and fathers' childcare demands, it is far less likely they know how much time they spend cooking and doing dishes. Proving the causal link between domestic time and

productivity is an on-going challenge in this literature. There may also be some unmeasured differences to account for the large variation in routine housework wage effects across women's and men's wage distributions. This seems unlikely in the case of men. Men may vary in their preference for doing domestic tasks, but what we revealed is that there was a larger penalty for this preference only at the top of men's wage distribution. Furthermore, although existing evidence has not found significant endogeneity bias when estimating the wage effects of men's domestic time, it would have been ideal if the data included suitable instrumental variables to test this directly.

A further limitation is that our arguments build mainly on U.S. research and results might not generalize beyond that country. Most other Western countries have lower levels of wage inequality than in the United States (Cooke, 2014); in turn, variation in effects across the wage distribution might be smaller than found here. Gupta and his colleagues (2010), for example, found that the differences in wives' housework hours predicted by their wages were smaller in Germany and Sweden where there is greater income equality than in the United States. Countries also vary significantly in their policy support for gender equality in parenting and employment (Cooke & Baxter, 2010). Perhaps the wage penalty differences between men and women found here would be less pronounced in more egalitarian contexts like Denmark and Sweden. If so, the intriguing empirical question is whether greater policy support for gender equality in paid and unpaid work reduces the penalties across women's wage distribution or increases them across men's. This is a particularly important question in the European context, given the European Commission's (2016) policy promotion of gender equality in unpaid time as a key avenue to gender wage equality.

In all, the results revealed gender and class hierarchies in the wage effects of domestic tasks. Women at all points of the wage distribution incurred some wage penalty for the routine housework that cannot be eliminated entirely, although the penalty lessened as wages increased. In contrast, only men at the very top of that wage distribution incurred significant wage penalties for routine housework on employment days. Together these findings indicate that the wage effects of domestic tasks reinforce gender-class hierarchies along normative lines.

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Table 1. *Summary of Hypotheses of Relationship between Time in Domestic Tasks and Wages across Women's and Men's Wage Distributions*

| | Productivity/ Volume Argument | Work Devotion (Class Normative) | Work Devotion (Gender-Class Normative) |
|---|---|---|---|
| Routine Housework | Decrease in penalty as wages increase (H1) | Increase in penalty as wages increase (H3) | Penalty largest at top of *men's* wage distribution (H4) |
| Non-routine Housework | Decrease in penalty as wages increase (H1) | Increase in penalty as wages increase (H3) | Penalty largest at top of *men's* wage distribution (H4) |
| Childcare | Increase in penalty as wages increase (H2) | Increase in penalty as wages increase (H3) (indistinguishable from H2) | Penalty largest at top of *men's* wage distribution (H4) |

Table 2. *Weighted Key Descriptive Statistics by Quantiles for 18 to 54 Year Old Employed Women and Men, 2010-2015 American Time Use Survey; Domestic Tasks Hours Per Employment Day*

| **WOMEN** | Total Mean/(SE) | Bottom decile Mean/(SE) | 10th to 25th Mean/(SE) | 25th to 50th Mean/(SE) | 50th to 75th Mean/(SE) | 75th to 90th Mean/(SE) | Top decile Mean/(SE) |
|---|---|---|---|---|---|---|---|
| Hourly wages | 18.71 | 6.73 *** | 9.35 *** | 13.13 *** | 19.70 | 29.53 *** | 48.18 *** |
| | (.18) | (.09) | (.04) | (.05) | (.09) | (.14) | (.54) |
| Paid hours (weekly) | 40.00 | 36.38 *** | 37.13 *** | 40.55 ** | 41.82 | 41.18 | 41.37 |
| | (.15) | (.63) | (.44) | (.28) | (.27) | (.30) | (.49) |
| Routine housework | .95 | 1.17 *** | 1.03 ** | .97 * | .87 | .84 | .84 |
| | (.02) | (.07) | (.05) | (.03) | (.03) | (.04) | (.04) |
| Non-routine housework | .05 | .06 | .05 | .06 | .05 | .05 | .07 |
| | (.01) | (.02) | (.01) | (.01) | (.01) | (.01) | (.02) |
| Childcare *(parents)* | 1.21 | 1.07 * | 1.11 | 1.13 | 1.24 | 1.48 * | 1.38 |
| | (.02) | (.07) | (.06) | (.05) | (.05) | (.07) | (.08) |
| *N* | *6,701* | *714* | *991* | *1,685* | *1,663* | *982* | *666* |
| **MEN** | Total Mean/(SE) | Bottom decile Mean/(SE) | 10th to 25th Mean/(SE) | 25th to 50th Mean/(SE) | 50th to 75th Mean/(SE) | 75th to 90th Mean/(SE) | Top decile Mean/(SE) |
| Hourly wages | 21.73 | 7.53 *** | 10.85 *** | 15.87 *** | 23.74 | 35.87 *** | 55.81 *** |
| | (.19) | (.08) | (.04) | (.06) | (.10) | (.18) | (.39) |
| Paid hours (weekly) | 44.54 | 40.54 *** | 43.35 *** | 45.31 | 45.61 | 46.59 * | 44.69 * |
| | (.16) | (.62) | (.37) | (.32) | (.25) | (.34) | (.34) |
| Routine housework | .41 | .40 | .39 | .41 | .43 | .45 | .37 |
| | (.01) | (.03) | (.03) | (.02) | (.02) | (.03) | (.03) |
| Non-routine housework | .17 | .16 | .15 | .17 | .20 | .16 | .13 * |
| | (.01) | (.03) | (.03) | (.02) | (.02) | (.02) | (.02) |
| Childcare *(parents)* | .75 | .44 *** | .63 ** | .72 * | .84 | .89 | .95 |
| | (.02) | (.05) | (.05) | (.04) | (.04) | (.05) | (.05) |
| *N* | *7,252* | *772* | *1,066* | *1,811* | *1,814* | *1,078* | *711* |

T-tests significant * p<0.05, ** p<0.01, *** p<0.001, compared to 50th-75th quantile. Parents only: *n = 4,150* fathers; *n = 4,137* mothers.

Table 3. *Unconditional Quantile Regression Estimates of Hourly Wage Impact of Employment Day Domestic Tasks (Hours per Day) across Wage Distribution of 18 to 54 Year Old Women and Men, 2010-2015 American Time Use Survey data*

| **WOMEN** | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $10^{th}$ q | | $25^{th}$ q | | $50^{th}$ q | | $75^{th}$ q | | $90^{th}$ q | | t-tests | | |
| | B | | B | | B | | B | | B | | 10 v 90 | 10 v 50 | 50 v 90 |
| Routine housework | -0.053 | *** | -0.044 | *** | -0.034 | *** | -0.035 | *** | -0.026 | ** | **-1.909** | -1.412 | -0.595 |
| | (0.010) | | (0.009) | | (0.009) | | (0.010) | | (0.010) | | | | |
| Non-routine housework | -0.041 | | -0.011 | | 0.004 | | -0.042 | | 0.001 | | -0.797 | -1.097 | 0.057 |
| | (0.029) | | (0.026) | | (0.029) | | (0.027) | | (0.044) | | | | |
| Childcare (*mothers*) | 0.005 | | -0.004 | | 0.005 | | 0.004 | | -0.009 | | 0.800 | 0.000 | 0.800 |
| | (0.009) | | (0.009) | | (0.009) | | (0.011) | | (0.015) | | | | |
| MEN | | | | | | | | | | | | | |
| | $10^{th}$ q | | $25^{th}$ q | | $50^{th}$ q | | $75^{th}$ q | | $90^{th}$ q | | t-tests | | |
| | B | | B | | B | | B | | B | | 10 v 90 | 10 v 50 | 50 v 90 |
| Routine housework | -0.012 | | -0.017 | | -0.017 | | -0.013 | | -0.061 | ** | **1.973** | 0.243 | **1.911** |
| | (0.016) | | (0.017) | | (0.013) | | (0.018) | | (0.019) | | | | |
| Non-routine housework | 0.007 | | 0.011 | | 0.041 | * | 0.000 | | -0.011 | | 0.652 | -1.264 | **1.987** |
| | (0.020) | | (0.017) | | (0.018) | | (0.016) | | (0.019) | | | | |
| Childcare (*fathers*) | 0.010 | | 0.011 | | -0.001 | | -0.016 | | -0.029 | | **2.097** | 0.707 | 1.505 |
| | (0.011) | | (0.012) | | (0.011) | | (0.014) | | (0.015) | | | | |

* p<0.05, ** p<0.01, *** p<0.001

*Notes:* Estimates controlling marriage (0/1), cohabitation (0/1), previously married (0/1), number of children, hours of work per week, years of education, years of potential experience, potential experience squared, potential experience *education, potential-experience-squared *education, ethnicity (Black, Hispanic, Asian/Other; referent non-Hispanic White), occupation (sales/service/admin, construction/production/transport; referent professional/managerial), leisure time, disabilities (0/1), metropolitan area (0/1), weekend diary day (0/1), and year (2015 referent). Full tables for full sample in Appendix. T-tests in bold are statistically significant at p<0.05, one-tailed test.

JMF-2017-5841- **ONLINE APPENDIX**

Table A. *Full Descriptive Statistics for Women and Men Age 18 to 54, 2010-2015 American Time Use Survey; Domestic Time in Hours per Employment Day*

| **WOMEN** | Total Mean/(SE) | Bottom decile Mean/(SE) | | 10th to 25th Mean/(SE) | | 25th to 50th Mean/(SE) | | 50th to 75th Mean/(SE) | 75th to 90th Mean/(SE) | | Top decile Mean/(SE) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hourly wages | 18.71 | 6.73 | *** | 9.35 | *** | 13.13 | *** | 19.70 | 29.53 | *** | 48.18 | *** |
| | (.18) | (.09) | | (.04) | | (.05) | | (.09) | (.14) | | (.54) | |
| Routine housework | .95 | 1.17 | *** | 1.03 | ** | .97 | * | .87 | .84 | | .84 | |
| | (.02) | (.07) | | (.05) | | (.03) | | (.03) | (.04) | | (.04) | |
| Non-routine housework | .05 | .06 | | .05 | | .06 | | .05 | .05 | | .07 | |
| | (.01) | (.02) | | (.01) | | (.01) | | (.01) | (.01) | | (.02) | |
| Childcare *(all)* | .60 | .61 | | .62 | | .54 | | .57 | .69 | * | .73 | ** |
| | (.02) | (.05) | | (.04) | | (.03) | | (.03) | (.04) | | (.05) | |
| Childcare *(parents only)* | 1.21 | 1.07 | * | 1.11 | | 1.13 | | 1.24 | 1.48 | * | 1.38 | |
| | (.02) | (.07) | | (.06) | | (.05) | | (.05) | (.07) | | (.08) | |
| Leisure | 2.54 | 2.73 | * | 2.85 | *** | 2.58 | | 2.48 | 2.34 | | 2.11 | *** |
| | (.03) | (.10) | | (.09) | | (.06) | | (.05) | (.06) | | (.08) | |
| Married (0/1) | .51 | .29 | *** | .37 | *** | .52 | * | .57 | .64 | ** | .67 | *** |
| | (.01) | (.02) | | (.02) | | (.02) | | (.02) | (.02) | | (.02) | |
| Cohabiting (0/1) | .07 | .06 | | .09 | | .08 | | .08 | .07 | | .07 | |
| | (.00) | (.01) | | (.01) | | (.01) | | (.01) | (.01) | | (.02) | |
| Previously married (0/1) | .13 | .13 | | .16 | | .13 | | .14 | .11 | * | .11 | |
| | (.00) | (.01) | | (.01) | | (.01) | | (.01) | (.01) | | (.01) | |
| Children (number) | .78 | .79 | | .84 | * | .73 | | .71 | .80 | | .91 | *** |
| | (.02) | (.05) | | (.05) | | (.03) | | (.03) | (.04) | | (.05) | |
| Paid hours (weekly) | 40.00 | 36.38 | *** | 37.13 | *** | 40.55 | ** | 41.82 | 41.18 | | 41.37 | |
| | (.15) | (.63) | | (.44) | | (.28) | | (.27) | (.30) | | (.49) | |
| Education (years) | 14.37 | 12.42 | *** | 12.68 | *** | 13.79 | *** | 15.09 | 16.08 | *** | 17.00 | *** |
| | (.04) | (.14) | | (.11) | | (.07) | | (.08) | (.09) | | (.12) | |
| Experience (years) | 16.91 | 13.09 | *** | 15.60 | *** | 17.28 | | 18.08 | 18.02 | | 18.22 | |
| | (.19) | (.62) | | (.54) | | (.37) | | (.35) | (.44) | | (.48) | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Production/Transport (0/1) | .06 | .08 | * | .10 | *** | .09 | *** | .04 | .03 | | .02 | * |
| | (.00) | (.01) | | (.01) | | (.01) | | (.01) | (.01) | | (.01) | |
| Sales/Service/Admin (0/1) | .49 | .82 | *** | .73 | *** | .58 | *** | .38 | .20 | *** | .13 | *** |
| | (.01) | (.02) | | (.02) | | (.02) | | (.02) | (.02) | | (.02) | |
| Hispanic (0/1) | .16 | .27 | *** | .27 | *** | .17 | ** | .12 | .08 | ** | .05 | *** |
| | (.01) | (.02) | | (.02) | | (.01) | | (.01) | (.01) | | (.01) | |
| Black (0/1) | .13 | .18 | ** | .15 | | .15 | | .13 | .09 | ** | .08 | *** |
| | (.00) | (.02) | | (.01) | | (.01) | | (.01) | (.01) | | (.01) | |
| Asian/Other (0/1) | .07 | .04 | * | .07 | | .05 | | .07 | .07 | | .13 | ** |
| | (.00) | (.01) | | (.01) | | (.01) | | (.01) | (.01) | | (.02) | |
| Disabilities (0/1) | .02 | .03 | * | .02 | | .02 | | .01 | .01 | | .02 | |
| | (.00) | (.01) | | (.00) | | (.00) | | (.00) | (.00) | | (.01) | |
| Metropolitian area (0/1) | .86 | .81 | *** | .80 | *** | .82 | *** | .89 | .91 | | .95 | *** |
| | (.01) | (.02) | | (.02) | | (.01) | | (.01) | (.01) | | (.01) | |
| Weekend (0/1) | .10 | .18 | *** | .15 | *** | .09 | *** | .06 | .05 | | .05 | |
| | (.00) | (.02) | | (.01) | | (.01) | | (.00) | (.01) | | (.01) | |
| Year 2010 | .16 | .15 | | .15 | | .17 | | .17 | .16 | | .17 | |
| | (.01) | (.02) | | (.01) | | (.01) | | (.01) | (.01) | | (.02) | |
| Year 2011 | .16 | .16 | | .16 | | .17 | | .17 | .15 | | .15 | |
| | (.01) | (.02) | | (.01) | | (.01) | | (.01) | (.01) | | (.01) | |
| Year 2012 | .17 | .18 | | .17 | | .17 | | .15 | .18 | | .16 | |
| | (.01) | (.02) | | (.02) | | (.01) | | (.01) | (.02) | | (.02) | |
| Year 2013 | .16 | .16 | | .16 | | .16 | | .18 | .16 | | .17 | |
| | (.01) | (.02) | | (.01) | | (.01) | | (.01) | (.01) | | (.02) | |
| Year 2014 | .17 | .20 | | .15 | | .18 | | .16 | .17 | | .16 | |
| | (.01) | (.02) | | (.02) | | (.01) | | (.01) | (.02) | | (.02) | |
| N | 6,701 | 714 | | 991 | | 1,685 | | 1,663 | 982 | | 666 | |

| **MEN** | Total | Bottom decile | | 10th to 25th | | 25th to 50th | | 50th to 75th | 75th to 90th | | Top decile | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Mean/(SE) | Mean/(SE) | | Mean/(SE) | | Mean/(SE) | | Mean/(SE) | Mean/(SE) | | Mean/(SE) | |
| Hourly wages | 21.73 | 7.53 | *** | 10.85 | *** | 15.87 | *** | 23.74 | 35.87 | *** | 55.81 | *** |
| | (.19) | (.08) | | (.04) | | (.06) | | (.10) | (.18) | | (.39) | |
| Routine housework | .41 | .40 | | .39 | | .41 | | .43 | .45 | | .37 | |
| | (.01) | (.03) | | (.03) | | (.02) | | (.02) | (.03) | | (.03) | |
| Non-routine housework | .17 | .16 | | .15 | | .17 | | .20 | .16 | | .13 | * |
| | (.01) | (.03) | | (.03) | | (.02) | | (.02) | (.02) | | (.02) | |
| Childcare *(all)* | .37 | .19 | *** | .30 | *** | .33 | ** | .41 | .49 | * | .61 | *** |
| | (.01) | (.02) | | (.03) | | (.02) | | (.02) | (.03) | | (.04) | |
| Childcare *(parents only)* | .75 | .44 | *** | .63 | ** | .72 | * | .84 | .89 | | .95 | |
| | (.02) | (.05) | | (.05) | | (.04) | | (.04) | (.05) | | (.05) | |
| Leisure | 3.00 | 3.49 | *** | 3.25 | *** | 2.97 | | 2.87 | 2.68 | * | 2.67 | * |
| | (.03) | (.12) | | (.08) | | (.06) | | (.05) | (.06) | | (.07) | |
| Married (0/1) | .56 | .31 | *** | .42 | *** | .53 | *** | .65 | .73 | *** | .81 | *** |
| | (.01) | (.02) | | (.02) | | (.02) | | (.01) | (.02) | | (.02) | |
| Cohabiting (0/1) | .07 | .07 | | .09 | * | .09 | ** | .06 | .05 | | .03 | ** |
| | (.00) | (.01) | | (.01) | | (.01) | | (.01) | (.01) | | (.01) | |
| Previously married (0/1) | .08 | .07 | | .08 | | .09 | | .08 | .06 | | .07 | |
| | (.00) | (.01) | | (.01) | | (.01) | | (.01) | (.01) | | (.01) | |
| Children (number) | .83 | .55 | *** | .74 | * | .75 | ** | .87 | 1.00 | ** | 1.31 | *** |
| | (.02) | (.04) | | (.04) | | (.03) | | (.03) | (.04) | | (.06) | |
| Paid hours (weekly) | 44.54 | 40.54 | *** | 43.35 | *** | 45.31 | | 45.61 | 46.59 | * | 44.69 | * |
| | (.16) | (.62) | | (.37) | | (.32) | | (.25) | (.34) | | (.34) | |
| Education (years) | 13.85 | 11.95 | *** | 12.33 | *** | 13.30 | *** | 14.47 | 15.73 | *** | 16.80 | *** |
| | (.05) | (.14) | | (.12) | | (.09) | | (.07) | (.09) | | (.12) | |
| Experience (years) | 17.12 | 13.07 | *** | 14.66 | *** | 17.47 | ** | 18.72 | 18.89 | | 20.10 | ** |
| | (.17) | (.53) | | (.43) | | (.34) | | (.31) | (.36) | | (.37) | |
| Production/Transport (0/1) | .34 | .38 | | .41 | * | .44 | *** | .35 | .18 | *** | .07 | *** |
| | (.01) | (.02) | | (.02) | | (.02) | | (.01) | (.01) | | (.01) | |
| Sales/Service/Admin (0/1) | .30 | .53 | *** | .44 | *** | .29 | *** | .23 | .15 | *** | .13 | *** |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | (.01) | (.02) | | (.02) | | (.01) | | (.01) | (.01) | | (.02) | |
| Hispanic (0/1) | .19 | .34 | *** | .31 | *** | .18 | *** | .13 | .08 | *** | .06 | *** |
| | (.01) | (.02) | | (.02) | | (.01) | | (.01) | (.01) | | (.01) | |
| Black (0/1) | .10 | .17 | *** | .11 | ** | .12 | *** | .08 | .06 | | .05 | * |
| | (.00) | (.02) | | (.01) | | (.01) | | (.01) | (.01) | | (.01) | |
| Asian/Other (0/1) | .07 | .05 | | .05 | | .06 | | .06 | .12 | *** | .13 | *** |
| | (.00) | (.01) | | (.01) | | (.01) | | (.01) | (.01) | | (.01) | |
| Disabilities (0/1) | .02 | .04 | * | .02 | | .03 | | .02 | .02 | | .02 | |
| | (.00) | (.01) | | (.01) | | (.01) | | (.00) | (.00) | | (.01) | |
| Metropolitian area (0/1) | .85 | .84 | | .81 | ** | .81 | *** | .86 | .93 | *** | .93 | *** |
| | (.01) | (.02) | | (.01) | | (.01) | | (.01) | (.01) | | (.01) | |
| Weekend (0/1) | .11 | .18 | *** | .17 | *** | .11 | *** | .08 | .05 | *** | .03 | *** |
| | (.00) | (.01) | | (.01) | | (.01) | | (.01) | (.01) | | (.01) | |
| Year 2010 | .16 | .15 | | .15 | | .16 | | .16 | .16 | | .15 | |
| | (.01) | (.01) | | (.01) | | (.01) | | (.01) | (.01) | | (.01) | |
| Year 2011 | .17 | .19 | | .16 | | .16 | | .17 | .15 | | .17 | |
| | (.01) | (.02) | | (.01) | | (.01) | | (.01) | (.01) | | (.02) | |
| Year 2012 | .16 | .16 | | .16 | | .15 | | .17 | .16 | | .17 | |
| | (.01) | (.02) | | (.01) | | (.01) | | (.01) | (.01) | | (.02) | |
| Year 2013 | .17 | .16 | | .20 | | .17 | | .17 | .17 | | .17 | |
| | (.01) | (.02) | | (.02) | | (.01) | | (.01) | (.01) | | (.02) | |
| Year 2014 | .17 | .14 | | .18 | | .17 | | .16 | .18 | | .17 | |
| | (.01) | (.02) | | (.02) | | (.01) | | (.01) | (.01) | | (.02) | |
| N | 7,252 | 772 | | 1,066 | | 1,811 | | 1,814 | 1,078 | | 711 | |

* p<0.05, ** p<0.01, *** p<0.001, compared to 50th-75th quantile. Parents only: *n = 4,150* fathers; *n = 4,137* mothers.

Table B. *Full Results for Unconditional Quantile Regressions Predicting Hourly Wage among 18 to 54 Year Old Women (n =6,701) and Men (n =7,252 ) on Employment Days, 2010-2015 American Time Use Survey*

**WOMEN**

| | 10th | | 25th | | 50th | | 75th | | 90th | |
|---|---|---|---|---|---|---|---|---|---|---|
| | B | | B | | B | | B | | B | |
| Routine housework | -0.053 | *** | -0.044 | *** | -0.034 | *** | -0.035 | *** | -0.026 | ** |
| | (0.010) | | (0.009) | | (0.009) | | (0.010) | | (0.010) | |
| Non-routine housework | -0.041 | | -0.011 | | 0.004 | | -0.042 | | 0.001 | |
| | (0.029) | | (0.026) | | (0.029) | | (0.027) | | (0.044) | |
| Childcare | 0.000 | | -0.009 | | -0.003 | | 0.000 | | -0.006 | |
| | (0.009) | | (0.008) | | (0.008) | | (0.010) | | (0.014) | |
| Leisure | -0.003 | | -0.018 | ** | -0.017 | ** | -0.027 | *** | -0.027 | ** |
| | (0.006) | | (0.006) | | (0.006) | | (0.007) | | (0.008) | |
| Married (0/1) | 0.131 | *** | 0.196 | *** | 0.120 | *** | 0.029 | | 0.031 | |
| | (0.026) | | (0.029) | | (0.032) | | (0.035) | | (0.038) | |
| Cohabiting (0/1) | 0.139 | ** | 0.177 | *** | 0.096 | * | 0.031 | | 0.100 | |
| | (0.043) | | (0.044) | | (0.046) | | (0.063) | | (0.081) | |
| Previously married (0/1) | 0.082 | ** | 0.051 | | 0.033 | | -0.067 | | -0.030 | |
| | (0.031) | | (0.038) | | (0.035) | | (0.044) | | (0.042) | |
| Children (number) | -0.022 | * | -0.058 | *** | -0.040 | *** | 0.003 | | 0.013 | |
| | (0.011) | | (0.011) | | (0.011) | | (0.013) | | (0.016) | |
| Paid hours (weekly) | 0.002 | | 0.005 | *** | 0.001 | | -0.003 | ** | -0.004 | ** |
| | (0.001) | | (0.001) | | (0.001) | | (0.001) | | (0.001) | |
| Education (years) | 0.083 | *** | 0.133 | *** | 0.085 | *** | 0.053 | *** | 0.020 | |
| | (0.015) | | (0.013) | | (0.010) | | (0.013) | | (0.016) | |
| Experience (years) | 0.099 | *** | 0.143 | *** | 0.026 | * | -0.058 | *** | -0.116 | *** |
| | (0.022) | | (0.019) | | (0.012) | | (0.016) | | (0.022) | |
| Experience^2 | -0.002 | *** | -0.003 | *** | 0.000 | | 0.002 | *** | 0.003 | *** |
| | (0.000) | | (0.000) | | (0.000) | | (0.000) | | (0.000) | |
| Exper x education | -0.005 | *** | -0.007 | *** | 0.001 | | 0.007 | *** | 0.011 | *** |
| | (0.001) | | (0.001) | | (0.001) | | (0.001) | | (0.002) | |
| Exper^2 x education | 0.000 | * | 0.000 | *** | 0.000 | ** | 0.000 | *** | 0.000 | *** |
| | (0.000) | | (0.000) | | (0.000) | | (0.000) | | (0.000) | |
| Production/Transport (0/1) | -0.031 | | -0.107 | * | -0.332 | *** | -0.340 | *** | -0.194 | *** |
| | (0.045) | | (0.044) | | (0.049) | | (0.054) | | (0.048) | |
| Sales/Service/Admin (0/1) | -0.111 | *** | -0.216 | *** | -0.367 | *** | -0.414 | *** | -0.269 | *** |
| | (0.024) | | (0.026) | | (0.030) | | (0.032) | | (0.032) | |
| Hispanic (0/1) | -0.067 | * | -0.115 | *** | -0.130 | *** | -0.100 | ** | -0.068 | * |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | (0.031) | | (0.033) | | (0.029) | | (0.033) | | (0.032) | |
| Black (0/1) | -0.018 | | -0.015 | | -0.085 | ** | -0.133 | *** | -0.127 | *** |
| | (0.029) | | (0.027) | | (0.029) | | (0.031) | | (0.033) | |
| Asian/Other (0/1) | -0.017 | | -0.060 | | -0.035 | | 0.009 | | 0.079 | |
| | (0.035) | | (0.037) | | (0.047) | | (0.050) | | (0.069) | |
| Disabilities (0/1) | -0.102 | | -0.030 | | -0.016 | | -0.047 | | 0.058 | |
| | (0.070) | | (0.069) | | (0.061) | | (0.067) | | (0.088) | |
| Metropolitian area (0/1) | 0.077 | ** | 0.147 | *** | 0.239 | *** | 0.206 | *** | 0.195 | *** |
| | (0.029) | | (0.031) | | (0.026) | | (0.033) | | (0.029) | |
| Weekend (0/1) | -0.093 | ** | -0.151 | *** | -0.108 | *** | -0.043 | | -0.020 | |
| | (0.032) | | (0.029) | | (0.023) | | (0.026) | | (0.028) | |
| Year 2010 | -0.206 | *** | -0.125 | ** | -0.095 | * | -0.141 | ** | -0.174 | ** |
| | (0.032) | | (0.043) | | (0.038) | | (0.045) | | (0.060) | |
| Year 2011 | -0.180 | *** | -0.125 | ** | -0.065 | | -0.167 | *** | -0.195 | *** |
| | (0.031) | | (0.047) | | (0.037) | | (0.042) | | (0.052) | |
| Year 2012 | -0.185 | *** | -0.115 | * | -0.045 | | -0.044 | | -0.134 | * |
| | (0.035) | | (0.048) | | (0.034) | | (0.045) | | (0.056) | |
| Year 2013 | -0.145 | *** | -0.075 | | -0.003 | | -0.081 | | -0.158 | ** |
| | (0.036) | | (0.047) | | (0.038) | | (0.048) | | (0.053) | |
| Year 2014 | -0.005 | | -0.021 | | 0.009 | | -0.033 | | -0.081 | |
| | (0.025) | | (0.034) | | (0.034) | | (0.043) | | (0.058) | |
| Constant | 0.651 | ** | -0.103 | | 1.168 | *** | 2.453 | *** | 3.303 | *** |
| | (0.239) | | (0.229) | | (0.162) | | (0.201) | | (0.251) | |

**MEN**

| | 10th | | 25th | | 50th | | 75th | | 90th | |
|---|---|---|---|---|---|---|---|---|---|---|
| | B | | B | | B | | B | | B | |
| Routine housework | -0.012 | | -0.017 | | -0.017 | | -0.013 | | -0.061 | ** |
| | (0.016) | | (0.017) | | (0.013) | | (0.018) | | (0.019) | |
| Non-routine housework | 0.007 | | 0.011 | | 0.041 | * | 0.000 | | -0.011 | |
| | (0.020) | | (0.017) | | (0.018) | | (0.016) | | (0.019) | |
| Childcare | 0.001 | | 0.009 | | 0.013 | | -0.013 | | -0.009 | |
| | (0.009) | | (0.011) | | (0.010) | | (0.013) | | (0.018) | |
| Leisure | -0.008 | | -0.017 | ** | -0.014 | ** | -0.013 | * | -0.006 | |
| | (0.007) | | (0.006) | | (0.005) | | (0.006) | | (0.006) | |
| Married (0/1) | 0.092 | ** | 0.178 | *** | 0.181 | *** | 0.107 | ** | 0.082 | * |
| | (0.034) | | (0.039) | | (0.030) | | (0.037) | | (0.037) | |
| Cohabiting (0/1) | 0.095 | | 0.100 | | 0.058 | | -0.037 | | -0.044 | |
| | (0.056) | | (0.059) | | (0.038) | | (0.047) | | (0.041) | |
| Previously married (0/1) | 0.022 | | 0.066 | | 0.036 | | 0.005 | | 0.053 | |
| | (0.045) | | (0.051) | | (0.043) | | (0.046) | | (0.051) | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Children (number) | -0.005 | | -0.041 | *** | -0.015 | | 0.043 | *** | 0.085 | *** |
| | (0.010) | | (0.012) | | (0.011) | | (0.012) | | (0.017) | |
| Paid hours (weekly) | 0.003 | ** | 0.003 | * | 0.000 | | -0.004 | *** | -0.007 | *** |
| | (0.001) | | (0.001) | | (0.001) | | (0.001) | | (0.001) | |
| Education (years) | 0.113 | *** | 0.169 | *** | 0.077 | *** | 0.018 | | -0.034 | * |
| | (0.014) | | (0.014) | | (0.011) | | (0.012) | | (0.014) | |
| Experience (years) | 0.143 | *** | 0.188 | *** | 0.038 | ** | -0.069 | *** | -0.152 | *** |
| | (0.024) | | (0.019) | | (0.013) | | (0.016) | | (0.019) | |
| Experience^2 | -0.003 | *** | -0.003 | *** | 0.000 | | 0.002 | *** | 0.003 | *** |
| | (0.001) | | (0.000) | | (0.000) | | (0.000) | | (0.000) | |
| Exper x education | -0.008 | *** | -0.009 | *** | 0.001 | | 0.008 | *** | 0.013 | *** |
| | (0.002) | | (0.001) | | (0.001) | | (0.001) | | (0.002) | |
| Exper^2 x education | 0.000 | *** | 0.000 | *** | 0.000 | | 0.000 | *** | 0.000 | *** |
| | (0.000) | | (0.000) | | (0.000) | | (0.000) | | (0.000) | |
| Production/Transport (0/1) | -0.008 | | -0.059 | | -0.221 | *** | -0.410 | *** | -0.447 | *** |
| | (0.030) | | (0.033) | | (0.027) | | (0.038) | | (0.039) | |
| Sales/Service/Admin (0/1) | -0.145 | *** | -0.302 | *** | -0.342 | *** | -0.445 | *** | -0.419 | *** |
| | (0.024) | | (0.033) | | (0.026) | | (0.038) | | (0.042) | |
| Hispanic (0/1) | -0.134 | *** | -0.301 | *** | -0.183 | *** | -0.128 | *** | -0.025 | |
| | (0.035) | | (0.033) | | (0.026) | | (0.030) | | (0.031) | |
| Black (0/1) | -0.144 | *** | -0.190 | *** | -0.177 | *** | -0.189 | *** | -0.137 | *** |
| | (0.043) | | (0.038) | | (0.029) | | (0.033) | | (0.032) | |
| Asian/Other (0/1) | 0.026 | | -0.031 | | -0.001 | | 0.163 | ** | 0.118 | |
| | (0.035) | | (0.046) | | (0.037) | | (0.054) | | (0.063) | |
| Disabilities (0/1) | -0.174 | | -0.132 | | -0.036 | | -0.097 | | -0.042 | |
| | (0.091) | | (0.095) | | (0.059) | | (0.067) | | (0.086) | |
| Metropolitian area (0/1) | 0.033 | | 0.089 | ** | 0.155 | *** | 0.220 | *** | 0.166 | *** |
| | (0.036) | | (0.034) | | (0.027) | | (0.030) | | (0.032) | |
| Weekend (0/1) | -0.094 | ** | -0.116 | *** | -0.136 | *** | -0.130 | *** | -0.107 | *** |
| | (0.036) | | (0.035) | | (0.023) | | (0.023) | | (0.021) | |
| Year 2010 | -0.200 | *** | -0.194 | *** | -0.198 | *** | -0.220 | *** | -0.188 | *** |
| | (0.035) | | (0.042) | | (0.036) | | (0.041) | | (0.046) | |
| Year 2011 | -0.188 | *** | -0.135 | ** | -0.118 | *** | -0.129 | ** | -0.096 | * |
| | (0.048) | | (0.041) | | (0.035) | | (0.041) | | (0.048) | |
| Year 2012 | -0.167 | *** | -0.171 | *** | -0.108 | *** | -0.130 | ** | -0.123 | * |
| | (0.037) | | (0.043) | | (0.031) | | (0.042) | | (0.050) | |
| Year 2013 | -0.083 | * | -0.067 | | -0.065 | * | -0.021 | | -0.025 | |
| | (0.035) | | (0.044) | | (0.032) | | (0.045) | | (0.047) | |
| Year 2014 | -0.085 | ** | -0.042 | | -0.020 | | 0.019 | | -0.004 | |
| | (0.032) | | (0.037) | | (0.037) | | (0.044) | | (0.049) | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Constant | 0.251 | -0.393 | 1.506 | *** | 3.018 | *** | 4.304 | *** |
| | (0.240) | (0.218) | (0.164) | | (0.173) | | (0.214) | |

* p<0.05, ** p<0.01, *** p<0.001